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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,087	10/01/2001	Lan Chen	214470US2	5393

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EXAMINER

EWART, JAMES D

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/966,087	Applicant(s) CHEN ET AL.	
	Examiner James D Ewart	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-6 and 8-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. (U.S. Patent No. 6,016,311) and further in view of Inata (U.S. Patent No. 5,910,953).

Referring to claims 2 and 8, Gilbert et al. teaches a method of allocating radio resources, in a base station, to the base station and a mobile station (Column 4, lines 3-6 and Column 5, Lines 41-48), comprising the steps of: obtaining a ratio (Column 7, Lines 9-12) between traffic of uplink for transmission from the mobile station to the base station and traffic of downlink for transmission from the base station to the mobile station (Column 4, Lines 57-65; Column 5, Lines 30 – 57 and Column 15, Lines 22-45) such that the ratio reflects empirical data (Column 5, Lines 30-48; Column 8, Lines 8-19; Column 14, Lines 17-31 and 18, Lines 41-53); allocating the radio resources to the uplink and the downlink according to the ratio obtained in the obtaining step (Column 4, Lines 54-65 and Column 5, Lines 48-52) and dividing time into a plurality of time periods, wherein said step of obtaining a ratio obtains the ratio (Column 7, Lines 9-12) with respect to each one of the time periods by deriving the ratio from traffic of the uplink of a corresponding time period and traffic of the downlink of the corresponding time period (Column 7, Line 66 to Column 8, Line 14, Column 15, Lines 9-14 and Column 16, Lines 1-3),

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but does not teach wherein the time period corresponds with at least one of days of a week and hours of a day. Inata teaches wherein the time period corresponds with at least one of days of a week and hours of a day (Column 5, Lines 4-16). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al. with the teaching of Inata wherein the time period corresponds with at least one of days of a week and hours of a day to allocate resources to accommodate traffic changes in the cells (Column 5, Lines 4-5).

Referring to claims 3 and 9, Gilbert et al. teaches wherein said step of obtaining a ratio obtains the ratio by averaging a ratio between traffic of the uplink and traffic of the downlink (Column 7, Line 66 to Column 8, Line 14, Column 15, Lines 9-14 and Column 16, Lines 1-3) over a first predetermined period with respect to each one of the time periods (Column 15, Lines 6-14; Column 15, Lines 34-49, Column 16, Lines 1-3 and Column 18, Lines 41-53).

2. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. and Inata and further in view of Baden et al. (U.S. Patent No. 6,353,598).

Referring to claims 4 and 10, Gilbert et al. further teaches obtaining an instantaneous ratio between traffic of the uplink and traffic of the downlink for a second predetermined period immediately preceding a present instant (Column 15, Lines 6-12 and Column 15, Lines 27-45 and Column 18, Lines 41-53) where the second predetermined period is shorter than the first predetermined period (Column 18, Lines 41-53); to reflect a more accurate condition of uplink and downlink requirements (Column 4, Lines 3-7), wherein said step of allocating the radio

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resources allocates the radio resources to the uplink and the downlink according to the weighted average (Column 4, Lines 54-65 and Column 5, Lines 48-52), but does not teach calculating a weighted sum of the real time traffic demand value and the historical traffic demand. Periyalwar teaches calculating a weighted sum of the real time traffic demand using a weighted sum of the real time traffic demand value and the historical traffic demand (Column 11, Lines 58-63).

Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al. and Inata with the teaching of Periyalwar of calculating a weighted sum of the real time traffic demand using a weighted sum of the real time traffic demand value and the historical traffic demand to allocate channels (Column 12, Lines 46-49).

3. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. and Inata and further in view of Baden et al. (U.S. Patent No. 6,353,598).

Referring to claims 5 and 11, Gilbert et al. and Inata teach the limitations of claims 5 and 11, but do not teach transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink. Baden et al. teaches transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink (Column 2, Lines 64-66). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al. and Inata with the teaching of Baden et al. transmitting, to the mobile station, information about the radio resources with respect to at least one of the uplink and the downlink so that each mobile station entering a cell is provided with the traffic ratio ((Column 2, Lines 65-67).

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4. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert et al. and Inata and further in view of Yun (U.S. Patent No. 6,463,295).

Referring to claims 6 and 12, Gilbert et al. and Inata teach the limitations of claims 6 and 12, but do not teach allocating transmission power according to communication quality required for the uplink and the downlink. Yun teaches allocating transmission power according to communication quality required for the uplink and the downlink (Column 9, Lines 3-12 and Column 10, Lines 24-34). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Gilbert et al and Inata with the teaching of Yun of allocating transmission power according to communication quality required for the uplink and the downlink for power control methods that use a process for estimating the quality of received signal which is fast, insensitive to frequency offset variations; and leads to a measure that differentiates signal from interference and noise (Column 5, Lines 22-27).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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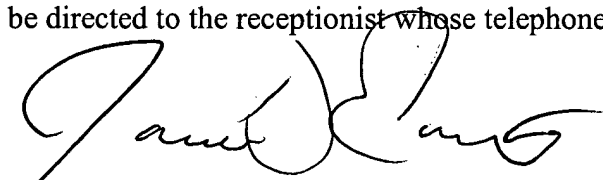
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



Ewart
May 25, 2005



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600